

осмелились, и устоявшие заводские корпуса продолжали хранить память о славных страницах истории каменской металлургии.

A.F. Torras
(*AMCTAIC*)
(*Barcelona*)

INDUSTRIAL HERITAGE IN CATALONIA, SPAIN

The geographical situation of Catalonia, bordering on France and therefore on Europe, has favoured its industrial development and the arrival of new technologies ever since the advent of the Industrial Revolution in the early 19th century.

Around the year 1900, Catalonia's industry represented a large part of all the industrial infrastructure of Spain. Traditionally, the textile sector had been the most important, not only in terms of the volume of production achieved and wealth generated but also for the number of workers it employed, and it systematically incorporated the constant technological advances in both machinery and production processes that arrived from Europe.

Other industrial activities were firmly established in Catalonia, within the metallurgical and chemical sectors, but none of them could rival the textile trade, even when the latter suffered the disappearance of important markets following Spain's loss in 1898 of the colonies of Cuba and the Philippines.

The companies that now began to emerge or expand took to basing themselves in strategic, well-communicated locations to ensure easy transport of their goods to the metropolis, Barcelona, and from there to the rest of Europe and the world, since the internal market of the Iberian Peninsula represented very little demand.

The factors of industrial localisation, that is, the conditions necessary for establishing an industry, are firstly the set of circumstances that allow for a reduction in costs, such as a location close to a port to facilitate the arrival of coal, and close to a large city to have easy access to a market, followed by the series of measures adopted by the State, whether of a general or local nature, and the circumstances of the region in terms of workers' skills (paper, cork, wool, cotton, coal, metal, etc.), its transport network and its economic and industrial conditions.

The locations where industries took root during the 19th century would prove crucial to their development during the 20th century, or at least during the first half of it. At the end of the 19th century, the yarn and fabric industries, and in particular the cotton sector, continued to lead the way.

However, in order to operate and make progress, the industries needed coal, a raw material that in Catalonia was scarce and of poor quality, which necessitated importing it from the north of Spain (the Basque Country and Asturias) or from Scotland (Glasgow) or Belgium (Charleroi). The yarn

factories, which made products for use by other companies, continued to rely on water power and established themselves on the banks of the rivers Llobregat, Cardener, Ter, Freser, Fluvià and Anoia, forming tight-knit complexes that fostered a dependence between the industrialist and the workers, making them comparable to the feudal structure, a type of paternalism similar to the system implemented by Owen in Scotland or Godin's Familistère in Guise, France.

The industrial colonies situated on riverbanks to exploit the water power were made up of a complex of industrial buildings set apart from the nuclei of population. They comprised, in addition to the factory itself, the school, the shop, the church, the workers' homes, the owner's house, the theatre and the basic infrastructures for harnessing the energy of the river, such as the weir and the channel.

All activities inside the colony were overseen by the owner. As they were located outside the urban nucleus, there was a dearth of information about all the social movements and strikes of the time, which favoured an unruffled production process. The difficulties experienced by the workers in associating or declaring strikes and the religious and moral control exerted by the priest of the colony turned these production centres supposedly into islands of peace amid the social conflicts and economic turbulences of the time.

These riverside colonies, which flourished from 1880 to 1928, offered their owners certain advantages over urban factories, such as free energy, tax exemptions, and a cheaper and more docile workforce that was monitored at all times, and so on, but despite these incentives they could ultimately not compete with their foreign counterparts.

The colonies needed a viable means of transport for their goods. The first railway laid in the Iberian Peninsula was the Barcelona-Mataró line, built in 1848 with Catalan capital, using a steam locomotive. In regard to roads, only three were in acceptable conditions: Barcelona-France via Girona, Barcelona-Lleida-Zaragoza-Madrid, and Barcelona-Tarragona-Valencia.

Sea transport also lagged far behind the rest of Europe, but with the introduction of the steam engine and new shipbuilding technology, the structure of maritime trade changed in the last third of the 19th century.

Steam was one of the fundamental energies in the industrialisation process in Catalonia. Industry in Catalonia during the 18th and 19th centuries attained its definitive impetus (1833-1840) thanks to the textile trade, which would occupy the leading position throughout the 19th century. Small and medium-sized firms (a habitual and traditional feature of Catalonia), along with a good measure of cottage industry, were the basic elements that constituted the production process of this industry. The absence of corporate and financial concentration would be a constant throughout the century.

The expansion of the textile trade was complemented by other industries, such as cork, agrofoodstuffs, paper, chemicals, metallurgy, etc. Between 1890 and 1910, the main motors of industrial growth would be the electricity,

construction and metallurgical sectors, which were favoured by the repatriation of capital from the recently lost overseas colonies and also by the export of viticulture products.

The industrialisation of Catalonia in the 19th century was marked by the limitation of demand and the lack of natural resources (iron ore and coal), which prevented the development of a powerful, modern iron and steel industry since these materials had to be imported. In view of this shortage, Catalan industry gradually structured itself on the basis of producing consumer goods with intensive use of labour and low energy costs thanks to the use of hydraulic power.

Little by little the markets for these industries receded, and they were replaced by new companies of mechanical and electrical constructions, which would breathe a little fresh air into the country's economy.

At the end of the 19th century, a large part of Catalonia's industrial activity still revolved around the textile sector, with problems of competitiveness and costs of raw materials which largely defined industrial localisation and led to protectionism and state intervention.

The turn of the century coincided with the impact of the crisis, aggravated by the loss of the colonial markets of Cuba and the Philippines, which stimulated the exploration of other commercial outlets.

The outbreak of the First World War presented an excellent opportunity for doing business by selling to the contending countries, giving rise to new industries like chemicals, various metallurgical sectors and construction. But this expansion was halted by the Spanish Civil War and the ensuing period of autarchy.

This industrial age in Catalonia has left behind innumerable vestiges of industrial heritage testifying to the various technological procedures which, over the course of two hundred years, permitted the progress and development of the Catalan economy.

It can be said that there are industrial testimonies of almost all the periods of Catalan industrialisation, mainly factory buildings and machinery. A different fate has befallen the documentation of the industries, which in many cases has disappeared, leaving a gap in the documentary memory available for study and inventory.

Modern industrialisation in Catalonia is a living process, with roots dating back some 200 years, and continues to be in full evolution.